CENTER FOR CELL SIGNALING

THE CENTER

Established in 1997 to identify new therapeutic targets and new drug candidates for asthma, allergy, inflammation, and cancer. Each of these diseases arises because cells are communicating the wrong information, which can be fixed by disrupting incorrect messages and providing correct signals. The Center now has 18 participating faculty members from eight different departments at the University of Utah, one from BYU and two from USU, focusing their talents in a synergistic way to create and commercialize new technologies.

TECHNOLOGY

The Center technologies focus on the synthesis and drug applications of new molecules involved in cell-cell communication, from controlling the biochemical pathways of signal transduction to designing instruments used to study these processes. Current developments include tools necessary for the elucidation of chemical pathways that regulate normal and abnormal cell responses. These tools include chemical synthesis, expression of recombinant proteins, preparation of monoclonal antisera, biomolecular interaction analysis, and phage display of high affinity peptides.

ACCOMPLISHMENTS

This year the center faculty has filed 26 invention disclosures and seven full or provisional patents. **A new company has been spun-off, Salus Therapeutics, Inc.** The company's focus is on identifying ribozyme and antisense targets for specific diseases. The company has research collaborations with the Center and has received two SBIR awards for over $850,000. **Echelon Research Laboratories,** spun-off last year from the Center to market reagents and kits for identifying oncogene activators and suppressors important in cancer diagnosis, also has R & D collaborations with the Center and has received six SBIR/STTR awards for a total of over $1 million.

CONTACT

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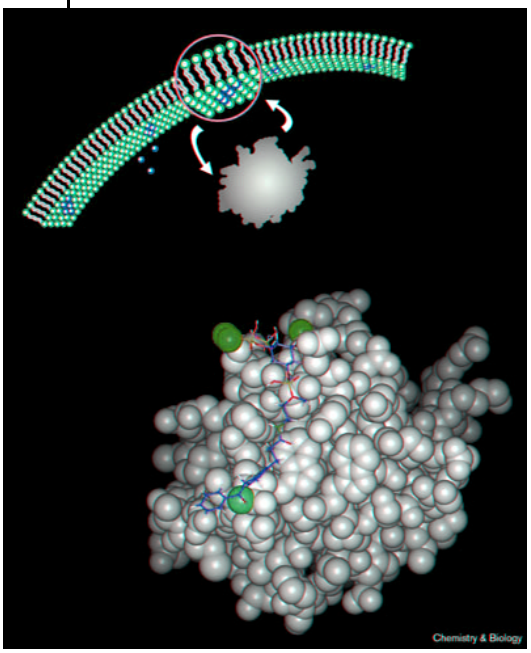
Can You Imagine...

. . . a new class of pharmaceuticals that provide therapeutic effects by artificially signaling selected cells in the body to perform desired actions to the benefit of the patient?

THE CENTER DEVELOPS AND COMMERCIALIZES NEW TECHNOLOGIES FOCUSED ON THE TREATMENT OF CANCER, ALLERGY, ASTHMA AND INFLAMMATION.



- Image was on the front cover of *Chemistry & Biology* & illustrates the recognition of a signaling lipid (PtdInsP2) in a cell membrane by a protein (profilin) in the cytosol that controls the reorganization of the actin cytoskeleton during cell replication, growth, movement, & adhesion. It is from the paper A. Chaudhary, J. Chen, Q.-M.Gu, W. Witke, D.J. Kwaitkowski, and G.D. Prestwich, Probing the Phosphoinositide 4,5-bisphosphate Binding Site of Human Profilin 1, *Chemistry & Biology*, Vol. 5, 273-281 (1998). This is exemplary of the founding technology for Echelon Research Lab, the first CCS spin-off company.